RESTORATION ADVISORY BOARD

Martinez, California

November 3, 2003

Reporter's Transcript of Meeting

NICCOLI REPORTING (650) 573-9339

NAVAL WEAPONS STATION
SEAL BEACH DETACHMENT CONCORD
RESTORATION ADVISORY BOARD

REPORTER'S TRANSCRIPT OF MEETING
November 3, 2003

Martinez Sheriff's Station
1980 Muir Road
Martinez, California

Reported by Janine P. Gamble, RPR, C.S.R. No. 10372

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PARTICIPANTS

COCHAIRS: MARGARET WALLERSTEIN - United States Navy
MARY LOUISE WILLIAMS - Concord resident

RAB MEMBERS:

CHRISTOPHER BOYER - Martinez resident
DAVID L. GRIFFITH - City of Concord representative
LAURENT MEILLIER - San Francisco Bay Regional Water Quality Control Board (SFBRWQCB)
MARIO MENESINI - Walnut Creek resident
JIM PINASCO - Department of Toxic Substances Control (DTSC)
PHILLIP RAMSEY - U.S. Environmental Protection Agency (EPA)
IGOR O. SKAREDOFF - Martinez resident

OTHER ATTENDEES

LISA ANICH - Concord resident
BETH BYRNE - Concord resident
HARRY BYRNE - Concord resident
DAVID COOPER - U.S. Environmental Protection Agency (EPA)
BRUCE GERSMAN - Concord Transcript
GREG GLASER - Concord resident
CAROLYN HUNTER - Tetra Tech EM Inc.
PATRICK LYNCH - Technical Assistance Grant (TAG)
DEAN McLEOD - CNWLRA
GREGG SMITH - United States Navy
PETER STRAUSS - Technical Assistance of Public Participation (TAPP)
STEPHEN F. TYAHLA - Department of the Navy

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MARTINEZ, CALIFORNIA, MONDAY, NOVEMBER 3, 2003

6:36 P.M.

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MS. WILLIAMS: Okay. Let's get started on the November 3rd, 2003 Restoration Advisory Board, Concord Naval Weapons Station, Seal Beach Detachment.

Do we have -- let's see.

We have our permanent guests, and we have some new faces here also.

Would you like to introduce yourselves, please.

MS. BYRNE: Are you listening, Greg?

MR. GLASER: My name is Greg Glaser, and I graduated from law school recently. And in between jobs I've been researching the Naval Weapons Station to find out what's buried where and how it affects them. And I've found the Concord library to be a great resource for that.

MS. BYRNE: And he lives in our neighborhood.

MS. WILLIAMS: Oh, wonderful.

MS. BYRNE: So we've been making lots of contact here.

Beth Byrne, glad to be back.

MR. BYRNE: Harry Byrne, Concord.

MR. GERSMAN: I'm Bruce Gersman. I'm a reporter with the Concord Transcript. Just come to

check out what you're up to.
MS. WILLIAMS: Welcome to you.
Do we have any public comments?
MS. WALLERSTEIN: You want to finish introductions?
MS. WILLIAMS: I'm sorry. I forgot. We have to introduce ourselves.
I'm Mary Lou Williams. I live in Concord, and I'm the community cochair.
MS. WALLERSTEIN: I'm Margaret Wallerstein. I'm the Navy RAB cochair and program manager for the IR Program.
MR. TYAHLA: I'm Steve Tyahla. I'm the lead remedial project manager for the Navy.
MR. STRAUSS: I'm Peter Strauss. I'm the technical advisor to the RAB.
MR. MENESINI: Mario Menesini, Walnut Creek resident, also with the Central Contra Costa Sanitary District.
MR. COOPER: David Cooper, U.S. EPA, community involvement coordinator.
MR. PINASCO: Jim Pinasco, Department of Toxic Substances Control, project manager.
MR. RAMSEY: Good evening. I'm Phillip Ramsey with the United States Environmental Protection Agency.

MR. SMITH: And I'm Gregg Smith, public affairs officer for the Naval Weapons Station.
MR. SKAREDOFF: I'm Igor Skaredoff, Martinez resident, and member of the Restoration Advisory Board.
MR. BOYER: Chris Boyer, Martinez resident.
MS. WILLIAMS: Okay. Then the next item is the approval of the agenda.
Do we have any --
Do we have any corrections, rearrangements, additions?
MS. WALLERSTEIN: Yes, we do.
I was going to suggest that we move -- the agenda for the next meeting, we move that before Peter Strauss's report so that if he needs some additional time, he can -- he can be available during the break and -- perhaps, but I thought it would give more continuity to the presentation.
MS. WILLIAMS: Is there a motion to accept this change?
MR. SKAREDOFF: Oh, I'll move so.
MS. WILLIAMS: Second?
MR. BOYER: (Raises hand.)
MS. WALLERSTEIN: I second.
MS. WILLIAMS: Chris seconded it.
Okay. It's been approved and seconded that we

approve the change of the agenda.
All in favor say Aye.
THE BOARD: Aye.
MS. WILLIAMS: Is there any opposition?
THE BOARD: (No verbal response elicited.)
MS. WILLIAMS: Okay. We approve that change.
MS. WALLERSTEIN: Okay. I take it everybody got their copy of the minutes -- or the transcript.
Oh, wait. Approval of 14 July. I'm sorry. That should be October.
MR. SKAREDOFF: That's another change, huh?
MS. WALLERSTEIN: Yeah, that's another change.
I guess I haven't been updating that part of my agenda. I've been -- been typing over the old ones. I believe -- what was it, October 4th?
MS. WILLIAMS: October 6th.
MS. WALLERSTEIN: Okay. So, are there any questions on the transcript?
THE BOARD: (No verbal response elicited.)
MS. WALLERSTEIN: Do I have a motion to approve it?
MR. MENESINI: I'll move approval.
MR. BOYER: I'll second it.
MS. WALLERSTEIN: Okay. All those in favor?
THE BOARD: Aye.

MS. WALLERSTEIN: Opposed?
THE BOARD: (No verbal response elicited.)
MS. WALLERSTEIN: Okay. Pass.
That brings us to unresolved business. The only outstanding action item is still left over from -- I believe it was the September meeting, and that was that the Navy will have a presentation on the relation of the Natural Resources Plan to the IR Program.
Right now that has been pushed off until March. And we can wade through that a little bit more when we discuss next -- the agenda for the next meeting and the following meeting.
I also want to bring up -- I take it all the RAB members got the E-mail that I sent out with the -- well, the first item was on new RAB members. And I guess we do have some new members from the public attending tonight, so that's good, but I really would urge everybody to try and recruit as much as possible to bring anybody that they think might be interested to attend a RAB meeting and to recruit new members for the board.
We would like to have this up to 15 community members, which is the maximum that the bylaws allow.
Are there any questions or comments on that?
MR. MENESINI: Do we have a --

Igor and I were talking. Do we have a small pamphlet that describes the action of the RAB that maybe you could hand to somebody who's interested in joining that describes the RAB?

MR. SMITH: I think one is being delivered to you even as we speak, Mario.

MR. COOPER: In color.

MR. MENESINI: Thank you.

MR. SKAREDOFF: There's also that other sheet that's similar -- comes with similar information. I grabbed a handful of those. I intend to use them this coming week.

MR. MENESINI: Thank you.

MR. RAMSEY: I think the fact sheet that -- the one existing sheet, I think that has an application included, I believe. That's maybe what you're talking about, Igor. The last big fact sheet that also described the base, that may have had contacts. That thing always has contacts. I'm not sure, it may or may not have an application.

MR. SKAREDOFF: It's kind of a nice presentation of what the RAB is about, where it is, and all that kind of stuff.

MR. MENESINI: In any event, something of this order will help, I think.

MS. WALLERSTEIN: Okay. And then when the next fact sheet comes out, that would be available to all RAB members, have extra copies, and it would have the updated contact information on it.

MR. SKAREDOFF: There's also information on the web page. I had the opportunity to take a look at it this week, and I was impressed. There has been a lot of improvement made on it, and it's pretty easy to use. I found it very helpful to navigate my way around the various processes. Highly recommend it.

MS. WALLERSTEIN: Well, Gregg Smith worked very hard on that.

MR. SKAREDOFF: Didn't even know it was you.

MR. SMITH: I'm always open to suggestions too from the RAB members. If they see any way that we can improve it, make it more user friendly, you know, please send me an E-mail, give me a call, whatever you would like to do, but, you know, that's your site.

MS. WALLERSTEIN: Okay. The next thing I mentioned in the E-mail was the RAB meeting minutes. And right now we're paying 15- to $1800 a month to have the court reporter do a transcript versus having -- Tetra Tech can provide minutes for 500 -- between 500 and $900 a month, 900 being worst case that we want a very detailed transcript of -- detailed minutes for a

long meeting.

Does anybody have any questions on that?

THE BOARD: (No verbal response elicited.)

MS. WALLERSTEIN: Would anyone like to provide some additional input?

MR. BOYER: I don't know that we need detailed transcripts of what goes on. Certainly detailed minutes would be helpful, decisions made and deliverables due by the Navy and by other -- other agencies, but I don't know that we need to have the total transcript.

MS. WALLERSTEIN: M-hmm.

MR. BOYER: We're not a legislative body.

MS. WALLERSTEIN: Uh-huh.

MR. GRIFFITH: I agree with that.

MS. WALLERSTEIN: Okay.

MR. SKAREDOFF: I guess, if I recall the proposal correctly, it involved having a backup of having the meeting recorded so if we wanted to get the verbatim comments, we could do that.

MS. WALLERSTEIN: Uh-huh.

MR. SKAREDOFF: I guess with that, my understanding -- unfortunately, some of the folks who originally proposed the transcript aren't here, but I'll try to reflect what I heard to be their views -- was that they felt there was some considerations about the

accuracy of the summaries, and so they wanted to have the transcript instead. I feel like if we have a summary and we have the opportunity to go to the recording, if we have questions about --

MS. WALLERSTEIN: Veracity.

MR. SKAREDOFF: -- how accurate the summaries were, how well they reflected what happened at the meeting, we could go back to the recording and have that as a resource to check on that.

I think that provides that safeguard without burdening everybody with this huge thick thing that takes a great act of will to read very thoroughly. So I would be willing to -- to forgo that and go to having a recording of the meeting with a summary actually generated.

MS. WALLERSTEIN: Okay. It is -- it is in the bylaws.

Oh, I'm sorry.

MR. STRAUSS: I mean, I'm just going to -- I want to share my experience. At the Moffett Field RAB we just have a summary, same way, and I don't think that anybody has ever gone back to the recording to -- to look at it.

People have raised questions on approving the minutes and said, you know, well, I don't -- I'm not

sure that I said it exactly that way and -- and corrected it there, and that's the -- that was the extent. So I was surprised to see this -- you know, Concord doing the transcripts.

MS. WALLERSTEIN: Well, I find the -- find the transcripts cumbersome to read.

MR. STRAUSS: Yes.

MS. WALLERSTEIN: But --

Well, it's in the bylaws that we will do a transcript. So, what we'll do at the next meeting is bring in a proposal to change the bylaws, and what we'll have to do is set up an ad hoc committee. We can do that all in one meeting, because the RAB itself can be the ad hoc committee.

We can bring in the proposed change, we can discuss it, the committee can approve it and then vote on it at the following meeting.

MR. SKAREDOFF: Can we maybe accelerate the process by having the proposed change brought to the meeting for the ad hoc committee to review there, or is that --

MS. WALLERSTEIN: I think the bylaws -- the bylaws require that we have the ad hoc committee, you know, meet and make the change, then present it to the RAB, who will then vote on it between 14 and 60 days, I

think it was. So we have to do all of that at one meeting, and then vote on it at the following meeting to meet the timing for the --

MR. SKAREDOFF: So we make the change at the next meeting, and then the following meeting we vote on the change?

MS. WALLERSTEIN: February we propose a change -- I'm sorry. January we propose the change, February we vote on it, March we implement.

MR. SKAREDOFF: So in the meantime we would continue to have transcripts for January and February.

MS. WALLERSTEIN: Right.

Okay. We'll do that. That's an action item.

I also brought up the matter of the technical meeting minutes. And we can just continue sending those meeting minutes out for the time being.

I had discussed this a little bit with Igor. My feeling was that with the changes in the remedial project managers' update and the format that you might find the technical meeting minutes a little less useful. Hopefully a lot of the issues and questions and answers will be handled in that, but we can keep sending out the technical meeting minutes.

And anybody that ever wants a copy of any minutes any time can have them, of course, and -- but

we'll go through the months and see how it works out, the remedial project managers' update reports, and we can revisit that later.

Does anybody have any comments on that?

MR. MENESINI: I think how I expressed myself in my E-mail was just about the same that was expressed here.

MS. WALLERSTEIN: Uh-huh.

MR. MENESINI: All we need is a good minute taker.

MS. WALLERSTEIN: Okay.

All right. Well, that brings us to the committee reports and announcements.

We've already discussed membership, so that brings us to the --

Oh, yes. I'm sorry.

MS. WILLIAMS: I just wanted to ask while everybody is here -- I asked some of the community RAB members -- I'm going to start actively trying to find some veterans because veterans -- you know, they have time, and hopefully they've still got their eyesight, and maybe we can -- you know, we can recruit some bodies there.

Does anybody here belong to any one of the local veterans groups?

I know in the phone book there is -- it's one of the veterans groups, then they have groups in Alamo and Danville and around. I know there is a very active Diablo Valley Vietnam Veterans group, and I was wondering if anybody belonged to that one.

I guess I have to do it all myself, try to track these things down. But if you find a veteran that's interested, grab him.

That's all I have to say.

MR. RAMSEY: Mary Lou, I would just add, if the RAB has any suggestions where they could see a need for a presentation by someone from the Navy or U.S. EPA, I would be more than happy to come and give a presentation to the group about the base like I did for Mario's organization and things like that.

So I'm happy to work with -- it would be nice if maybe the Navy and I -- it's nice to kind of coordinate, team up on these kind of things. We haven't done things like maybe visit cities to try to -- maybe make a little plea to city council. And I don't know if bases ever do that or not, but I'm certainly willing to help out.

MS. WILLIAMS: Okay. Thank you very much.

MR. SKAREDOFF: On November 12th is going to be the Watershed Symposium, which is all the various

regulatory and environmental and some development groups are going to be meeting at the Shadelands Center in Walnut Creek from 8:30 in the morning to 2:30 in the afternoon.

The agenda is already pretty full, but they will have an opportunity to have tables and displays there. So, that may be an opportunity to have a display about the RAB. I was planning to bring some of these sheets with me and pass them out.

MR. MENESINI: And then on November 17th we're going to have our usual third Monday lecture. This time it will be on the state of the estuary, San Francisco Bay Delta Estuary, the changes and the challenges. And that's one of the reasons I wanted these things was because I'll pass those out at the lecture and see if we can't garner a few more members that have interest.

MS. WILLIAMS: Is that the Environmental Alliance?

MR. MENESINI: The Environmental Alliance.

I kind of object to the eyesight statement.

MS. WILLIAMS: Well, no, but I mean --

MS. WALLERSTEIN: I'm a veteran, and I can see very well.

MS. WILLIAMS: Well, I am too.

MR. MENESINI: Not without my glasses

but. . . .

MS. WALLERSTEIN: Okay. Are we ready to move to the next item, remedial project managers update? I'll be able to say that one of these days.

MR. TYAHLA: That's me. Okay. Stand up for this. Make it a little easier.

I guess everybody probably saw the one handout we had which is called the "Navy RPM update for 3 November." It's up here on the table. It's a two-pager.

That's the latest thing that we're doing with kind of like a chronology of what our -- at least from the Navy's perspective it captures the Navy's correspondence, which includes reports that went out and also any meetings we had with regulatory agencies. So, that's a good snapshot of what went on.

Really, out of that list of things I'm going to talk in a little bit more detail about the Site 1 Tidal Area Landfill ROD, let you know where that's at, and then a couple other things I want to just kind of give you a quick update on. I know we have a lot of presentations tonight, so I didn't want to take too much time.

I'm not really ready for that one yet, but you can keep it handy, though.

MS. HUNTER: Okay.

MR. TYAHLA: First I'll give you like a little verbal update on the Site 1 ROD.

That ROD, as you know, was a Revised Draft Final ROD that we sent out, got comments back, and we were in informal dispute. I guess technically we still are in informal dispute with the EPA on that, really just trying to resolve what the language is going to be in that ROD. We're not changing the remedy or anything like that. What we're doing is really trying to fine-tune the language of that. We had a -- I think a -- probably -- yes, well, it's on the -- on the list of the RPM -- Navy RPM update.

We had a meeting on the 7th of October with the regulatory agencies to discuss the ROD and what language is used and what ARARs are used, iron that out.

And since that meeting on the 7th of October, we sent a couple of parts of it back to the regulatory agencies to kind of like say these are Navy-suggested edits, and we're waiting to get some feedback from those. There's still going to be like an ARAR table that we're revising, we want to send to them, you know, see how that looks to them, get that back.

But the ultimate goal is to fine-tune those sections that we thought really needed the work, address

the comments, and eventually the Navy will prepare a response to comments to everything we've received, a lot of comments we received, including from -- not RAB members, but I think from Patrick, your TAG consultant.

So those comments will be lumped into one set of responses to comments. But our goal is to really try to get it smooth, available, and hopefully signed sometime in December.

You know, it's -- the schedule's kind of, like, not real fixed right now. It's kind of a funny thing, when you go through any kind of informal dispute and our FFA, the clock in a way kind of stops. You kind of like work as expeditiously as you can to get the issue resolved so you can go ahead and complete the report or whatever the action is, in this case the ROD for Site 1.

So we're working on that. And I'm -- I'm personally somewhat cautiously optimistic, but hopefully we'll see a smooth thing get done in December so we get this thing put to bed for the cap -- for the cover on the landfill.

Also, I want to give you a quick update. We've been out in the field doing some fieldwork at Site 30, which is the Taylor Boulevard Bridge. There was some data gap soil work we needed to do there. The work plan was out. But the data gap work's being done out there

for that as well as the Litigation Area.
And I thought -- just a real quick summary on what's been going on out there in the field. We started in the field on the 22nd of October. And under Litigation Area data gaps work we've -- in total we've collected so far like 43 soil samples, eight grab water samples. Grab water samples are kind of like taken -- pretty much by hand means close to the surface. And 19 wells were resampled out there in the Litigation Area.
And there's still work to do. We have two more wells to sample out there in the Litigation Area and one more of these groundwater grab samples. Hopefully that will be done soon, like within the next week, finish that fieldwork.
The Taylor Boulevard Bridge we had difficulty in that we had an access -- an access problem, that our consultant kind of inadvertently got access to the Tidal Area when the Army really shouldn't have given it to them. It had to do with -- they had ongoing operations in the piers, and they wouldn't let Phillip on -- on the site. And I got a call from Phillip, and then I found out my consultant was being escorted off the site because they didn't have the proper authorization. It goes to show you --
MR. RAMSEY: The Navy really lost out that day,

in other words.
MR. TYAHLA: Yeah, we -- we couldn't win. We couldn't win.
So I found out what the proper procedure was, instantly found out who the right person was to get authorization from the Army.
And if you recall, the Army is a tenant activity. They are a tenant activity of the Navy using the Tidal Area part of the base, the piers and everything. So I found out that the gentleman that is in charge of giving the authorization for being on that area is a gentleman whose name is Tom Gregory. But his job is the force protection, slash, anti-terrorism officer.
So having been in the military myself for a long time and still in the reserve, yeah, you can't mess with that. It's just like their word is god when it comes to security.
So, that day I kind of drafted the procedure, got his approval on it, and now the consultants and, you know, the agencies as well are all getting access to the Tidal Area sites.
And for the regulatory agencies, an action item from our RPM meeting we had just days ago on the 28th, I'm trying to make sure that every time we have the

consultant doing work on the base that automatically I will ask and probably no problem getting approval for them for Laurent --
Is Laurent here?
MR. MEILLIER: Yeah, I'm here.
MR. TYAHLA: -- Jim Pinasco and Phillip Ramsey.
So every time the consultant is going to go out there, at the same time I'll get a request so you guys will get access to the Tidal Area. So, that was something that came out of our RPM meeting.
But anyway -- so, that's some work we've been doing at the Taylor Boulevard Bridge.
Since we got booted off the site there, we need to get back to the Taylor Boulevard Bridge, which we will hopefully finish that in November because that's our next open opportunity to get in the Tidal Area, starting like tomorrow and through the end of the month.
MR. MENESINI: Could you also use your influence for the National Park Service who has a great difficulty getting out to their monument at the -- at the water site?
MR. TYAHLA: I heard that has a long history in access with them, so I don't know.
But the basis is to get access on the Tidal Area site of the base. When there is ongoing

operations, meaning, you know, any kind of munitions handling, it's like key personnel only. Everybody else is, like, gone. And -- and they run their operations at varying times, and, you know, there is really not, you know, a lot of advance notice.
So for the Taylor Boulevard Bridge there is still some work we need to do out there. There is still -- in one day we managed to get three wells installed, but we still need to go out and finish those off, and then sample after they're developed and all that sort of thing, and do some of the records because one of the things we're doing with the Taylor Boulevard Bridge is try to get the depth of the sampling -- the depth of the waste rather.
Now, the other thing I want to go over, actually, I meant to go over this last month, it's a little -- it's a little dated, it's based on a report that was put out in late September, and it's just an overview of the sampling results we got from Site 31, which is -- used to be called Area of Concern 1.
And it's out along Port Chicago Highway. And to let you know where it is, it's -- Site 31 is here (indicating). So, it's along Port Chicago Highway. And as you go a little further down you run into -- oh, gosh.

MR. BOYER: Nichols Road.
MR. TYAHLA: Nichols Road. Thank you.
Somebody knows the area.
So you go down Nichols Road, and down in this area is where the chemical pigment plant is and -- chemical pigment and also General Chemical. Give you an idea where it is.
So this is just some highlights of the sampling results, pure data dump that we got from additional supplemental sampling that was done at this area mainly to help support what is coming up next, which is going to -- going to be a complete remedial investigation of this site.
Now, swear to god, I did this more for my benefit than for all of you, I swear, is to give me a rundown of the history of the site.
So I'm just going to point out a couple highlights here. You know, a lot of this -- it's a handout, you can read it, but the sampling I'm talking about was conducted in two events, in May and July, two groundwater sampling events, was based on the Sampling Analysis Plan. That's what a SAP is, if you forgot that.
And that Sampling Analysis Plan was -- did two things. It covered the sample way to do post Time

Critical Removal Action, or TCRA, we like to call it, and also the supplemental sampling activity. So this groundwater work is part of the supplemental sampling we did there to help support what information we would need to guide where our remedial investigation would go. So, it was done in two events.
The report, like I said, was issued in late September. It was 25 September. The analytes included metals, herbicides, pesticides, PCBs, and semi-volatile organics. And the little different color here, the blue, is the bottom-line results. What we found against the screening criteria we used were elevated levels of arsenic, mercury, and selenium. The biggest one that really stood out being the arsenic level. And that's -- that's definitely going to be a focus item in the remedial investigation.
So to give you an idea of the sense of the schedule in our current Site Management Plan, the schedule, the next thing due out for the site will be actually the Remedial Investigation work plan, the RI work plan, due 13 April.
So now click on the next site.
It might be hard to read this slide on this chart. I know you hate when people say that, but it's true. But in your handout you'll be able to see that.

What really stands out the most to me -- I'll show you in a moment the graph that shows where the wells are -- but monitoring well 3 where we had like over a thousand, pretty steady numbers too, about 1100 to 1200 micrograms per liter, it's parts per billion.
So if you're used to milligrams per liter, it would be like one point something milligrams per liter, but significantly way above the screening criteria, which included Region 9 tap water PRG, Preliminary Remediation Goal, also the national recommended water quality criteria as well as, you know, maximum -- maximum contaminant levels.
Give you some perspective on that. The level for arsenic is 10. We're at like 1200 out here. So, obviously, arsenic has grabbed our attention at this site.
Click the next one.
The other two -- well, the other two contaminants on there were, like I said, the selenium and mercury, but they weren't --
MR. SKAREDOFF: Excuse me, Steve. Are the Region 9 data in the same units?
MR. TYAHLA: Yes, they are. They're all in the same units, yeah.
MR. SKAREDOFF: So, much lower than everybody

else.
MR. TYAHLA: Yeah.
So when you look at them, like I said, arsenic's got our attention. Mercury and selenium are the other two metals there that exceed it. But when you really look at the numbers there, they don't -- they don't maybe do this, you know, but they are something, like, wow, what are we doing there at over a thousand?
This is just the edited table. There is nothing here that exceeded, but the second page gives you some footnotes to describe what some of those nice little letters were in the fine print.
So the map of the site. The four wells we are analyzing, got Port Chicago Highway here on the bottom, so you're, you know, basically north up there and east, west, south. The Contra Costa --
The Contra Costa County pump station for water is right there. And this -- the brown there is part of the site that's been excavated during our Time Critical Removal Action, but the well locations, monitoring well 1, 2, 3, which had those very high hits of arsenic, and 4 -- 4 -- each time -- each round we went out there to sample 4 has been dry.
And when you look at, you know, the depth it was drilled to, it's dry because it's obviously not deep

enough. But the depth it was picked at was based on some preliminary data that we thought was the right depth, turned out to be wrong.

So, what the Navy is going to do is use this data we got from there to decide what we're really going to need to do in the RI to assess groundwater in greater detail.

So, that's it. Like I said, it's just a data dump, and let you know where -- that we have that data that's out in that report. Next job is going to be to develop our remedial investigation work plan.

And I think I probably used up all my time.

I didn't. I'm good.

MS. WALLERSTEIN: There's another ten minutes.

MR. TYAHLA: That's all.

Any questions about that?

MR. McLEOD: My name is Dean McLeod.

How deep did they dig those wells?

MR. TYAHLA: I'm going by memory here, but we're talking screen intervals down to about 22, 25.

MR. RAMSEY: Steve, want me to answer the question?

MR. TYAHLA: Pardon?

MR. RAMSEY: Want me to answer it?

MR. TYAHLA: Do you have the number there?

MR. RAMSEY: Yeah.

Actually, Dean, the wells are on Port Chicago Highway. There is actually two depths because the elevation of Port Chicago Highway is 20 foot higher than it is as you get down to the north end of the property. These wells -- so 1 and -- excuse me.

Yeah, 1 and 2 is probably -- they're closer to 40 feet. I think they're a little deeper than 40 feet, then, because there is a 20 foot elevation difference.

Then you get down to the north end of the property, which is lower, those wells were shallow. I think they go to -- the one well that says 3 that was installed is still in the water table. I think it's like 20 something.

And then when they install the one well, which is well 4, in a spent acid pond site, that's why I believe they may have hit some little perched water or -- a little perched water that may have been a remnant of the pond -- bottom of the pond itself that would still act like a little basin and catch moisture. So, that well was installed way too shallow. They came back, unveiled it, and it just dried up.

And we looked at depth differences. It looks like it was probably 15 foot too shallow. So I believe the spent acid pond well will be installed eventually

because we did want four wells installed there and monitored.

MR. TYAHLA: We do have a table here that -- the screen interval where you actually have your wells screened at, and this is feet below ground surface. Well 1 was 41 to 51. It's typically a ten-foot screen interval. So 41 to 51 is the depth for monitoring well 1. 2 was almost identical, 42 to 52. 3 was 19 to 29. But then monitoring well 4 was like 5.5 to 15.5.

But then, again, you know, keep in mind it's not sea level. It does drop off, like Phillip said, about 20 feet when you go towards the Bay.

MR. McLEOD: The other question I had was, are you going to be able to go back to Union Oil for leaving this really high level of toxic --

MR. TYAHLA: I'm not a lawyer, and I don't play one on TV. No. Well, I think --

Well, I think -- the first part of our RI, we're going to have to go and try to assess, you know, typical RI, you know, extent and -- nature and extent of contaminant. So until we probably would really come up with some kind of strong evidence to say, well, it's not ours, or it sure looks like it's coming from here, that's when I would get our counsel involved, say here's what we have. Until now, I mean, we're -- I mean, this

is to me preliminary information.

I'm sure our -- I'm sure our lawyer's going to tell me, yeah, we can go present the case. And another interesting thing that the lawyers will always ask us too, you know, what kind of costs might be involved too.

But that's kind of a bridge we'll cross when we come to it, but it's a good point.

MR. McLEOD: Well, that -- that level of arsenic seems so incredibly high.

MR. TYAHLA: Yeah, I think there's some groundwater flow direction issues that have got to get ironed out too. I think the water levels we saw are not a constant direction, so we got to, like, work that out. And that fourth well, like Phillip said, that's really needed.

Any other questions?

Thanks for the questions.

MR. SKAREDOFF: Just for my clarification, the remedial investigation is going to try to define the extent of this plume?

MR. TYAHLA: I would anticipate so.

MR. RAMSEY: Igor, I mean, they're -- what we've been doing is pre-RI work, essentially. Some of the stuff was -- it was all considered the site inspection, which is pre RI.

We were trying to get the Navy to be as comprehensive as possible, but we're still going to have to come back with a remedial investigation work plan that may have likely some additional soil -- still some more soils work to be done, and then to continue the groundwater monitoring and decide if there is any other groundwater assessments that have to be done, more wells or not.

And that work plan, I don't know, it's coming up. I think that's for next year, though, so. . . .

MR. TYAHLA: Yeah, 13 April.

MS. WALLERSTEIN: Hear from other agencies. Laurent?

MR. MEILLIER: Sure. I mean, Phillip, go ahead.

I mean, usually EPA goes first.

MR. COOPER: Give it to him.

MR. RAMSEY: No. That's fine, Laurent. Happy to take the lead. That's fine. My pleasure.

Give me a rough idea, Mary Lou. Do I have three minutes, four minutes?

MS. WALLERSTEIN: Well, we're overtime already.

MS. WILLIAMS: Just do it.

MS. WALLERSTEIN: As fast as you can.

MR. RAMSEY: Well, I was trying to be like

Steve, as brief as possible, we have two presenters, one here with what the TAPP contractors have been doing.

This month I was very busy. I provided copies of my letters this month.

I just want to emphasize there are really -- written several -- lots of correspondence to the Navy this month. I just want to emphasize two primary letters that I have written. One was just issued last Thursday, October 30th, my comments on the Tidal Area sites RI.

And I'll talk just a few minutes about that. Really quickly, just kind of stepping back on the chronology, also in the middle of the month of October I provided comments on -- this is a -- would have been the August 18th Draft Sampling Plan for Site 22, which was now the expanded Magazine Area, the assessment of soil. So I provided comments on that Draft Sampling plan.

And then probably less significant, back on the 9th I believe I had some comments on the groundwater report that was for the -- Sites 13 and 22, which was the sampling of groundwater for perchlorate.

I just had a couple of brief comments about some -- adding some regulatory input and strategies, kind of, that's been worked out for those two sites to make that report complete. That was pretty minor.

That's the 9th letter, I believe, October 9th.

Real quickly, again, comments on this Site 22 SAP. EPA had some fairly significant comments on the Draft Sampling Plan to assess approximately 500 acres now of the Inland Area and Magazine Area that was now kind of again as part of this larger expanded Site 22 study area that has primarily been driven by assessment of arsenic.

So EPA has raised some questions. We think we've gotten a good start with the Navy, but we have still some fairly significant comments regarding the adequacy of the sampling, the completeness of the site audit.

I think consistent with -- Peter has raised issues about munitions handling. We are wondering now in terms of the site histories. Before we just proceed too blindly looking for only arsenic and pesticides we want to make sure that the munitions area and any other waste -- other chemical waste handling practices are being considered before we just proceed with this one study focusing only on arsenic.

And we've had some -- quite a few discussions with the Navy over the past about munitions and special munitions and discussions with their Munitions Response Program, and, you know, questions about how these are

going to be coordinated.

And just, again, we want to be as comprehensive -- we don't want to just go through that study, do one series of investigations focusing too much on arsenic and missing other site usages that may have occurred in these areas. We can't have a big study like that and only focus on one set of contaminants. We need to understand the history of those sites and what other kinds of chemicals and things were assessed.

I also, real quickly, raised some issues just about the questions, which are called Data Quality Objective Process, for assessing these sampling plans. We feel there are some other important questions that need to be asked regarding how the boundaries were being established and things like that so that we can finish the study and have sufficient information to be able to proceed and complete a Feasibility Study for this larger Site 22 that will assess a number of different action alternatives.

And I mention those in my letter. Those include four issues right now for this arsenic in soil. There could be remedial actions such as solidification, stabilization or excavation and backfilling, or the obvious institutional controls.

So we need to make sure that we're doing this.

We're filling this -- the data gaps we're filling will answer these questions regarding these alternative anal- -- alternative actions. They'll be analyzed in the Feasibility Study. So, that's Site 22.

And then just again, lastly, last letter sent out last Thursday, long overdue, been working on this thing for quite awhile, this is EPA's comments on the Navy's version of the Tidal Area Sites Remedial Investigation. And this was an August 8th version that they had referred to as officially a Revised Draft Final, so again, a re-done draft final version. The previous draft final version was 1999.

We had asked the Navy back in early October to, one, we need an extension on our review, and the other component of our request was that the Navy change that version and reclassify it from a revised draft final to a draft because of the long history that these Tidal Area sites have spanned, the complexity. There is lots of history, lots of regulatory comments over the years.

And this is, again, the Tidal Area Sites 2, 9, and 11. These are the sites that are around the landfill. But it's the other landfill, Site 2, which is R Area Disposal Site and the Wood Hogger Site and the Taylor Road Sites.

So this document -- it's a relatively longer

letter. So most of the time for regulatory agencies or the public, the more pages we write typically means the more concerns, there is more issues.

And without taking too much time, just want to emphasize that we do have quite a few major comments. I know in the past we've tried to go through the details. And since we haven't really made specific time, I won't drag this out. But, again, there are a number of major comments we have regarding the adequacy of the work that's been done to date. We still have some questions regarding the need for additional samples and a specific number of, you know, specific areas on essentially all three of these sites.

In particular we have lots of concerns about the other disposal site, the Site 2 R area, which was essentially the military's munition disposal and probably inert -- there's all kinds of other munition materials, metal scrappings and other probably container-type materials, but there may have been military munition wastes also disposed there.

So we're really concerned about the Navy's conclusions in that draft -- Revised Draft Final RI that there was acceptable risks. They had proposed a no further action for those three sites. And both U.S. EPA and speaking for -- I know I saw -- I've seen the Fish

and Game comments, Laurent -- I believe the state and EPA are all unanimous in having concerns and disagreement with the Navy about the risks and their recommendation for no further action.

So we're hoping to be able to continue to work with the Navy, sit down and talk about the specific areas that we feel the Navy should be a little bit more open minded to additional characterization work, and potentially even some kind of removal or remedial actions to get these contaminated soils assessed.

There is issues about surface water measurements that still need to be done. Lots of additional assessments. Groundwater assessments are still a big question. A number of things we need to work with the Navy on.

So without taking more time, I have copies of my letter here. Folks are welcome. You know, there is lots of specific comments, but you can just kind of get through some of the first general -- I have a major and general comments section in my letter, so you can kind of get through the bigger comments without necessarily having to get through the whole thing.

And that's I think it for at least my time. Thank you for your time. If you have any questions, I'd be happy to answer them.

MR. PINASCO: Phillip, I'll interject right now, DTSC is soliciting comments from other agencies. We're putting a package together probably at the end of this week or shortly thereafter. Actually, the Fish and Game comments were a part of that package. So, there are more comments from the RI coming.

MS. WALLERSTEIN: We have a question over here.

MR. MCLEOD: Phillip, what did you say those site numbers were again?

MR. RAMSEY: This is the -- the Tidal Area sites. It's 2, 9, and 11.

MR. MCLEOD: What's the date of your letter?

MR. RAMSEY: The date of my letter is October 30th. I have a copy here if you'd like.

MR. MCLEOD: Thanks.

MR. MEILLIER: Laurent for the Water Board.

Aside from all the meetings that Steve mentioned, we did not have a UST RPM meeting this month. We had one I believe in the earlier part of the month just before the RAB, early part of October.

But Board staff met with my supervisor to talk about the ROD, the Site 1 ROD on Friday, and we still have some, you know, contentious issues with the Navy on this ROD. And my supervisor indicated that there is a possibility that we might write a concurrence letter

that stipulates some conditions. So, it would be a conditional concurrence letter; it would not be a concurrence letter on the ROD if those issues are not resolved between the Navy and the Board.

In terms of correspondence, and if you are interested also about those -- I mean, if the public is interested on the specific issues that Board staff is currently working with the Navy on resolving, I can present them to you as well.

In terms of correspondence, Board staff issued three letters of comments. The first one on the RI for the Tidal Area Sites 2, 9, and 11; the next one on the Site 22 SAP addendum; and the third one on the groundwater sampling for Site 13 and 22.

And that's about it for my update.

MR. SKAREDOFF: Laurent, would you mind maybe giving us little highlights of what the issues were on that first --

MR. MEILLIER. Sure.

So the first issue is on the potential production and the estimation of the production of the landfill for gas -- gas production such as methane or other VOCs. And the issue is the fact that, you know, they are actually gathering samples across the state for landfills that have had significant amount of gas

generation, and in some cases that -- also in some cases have impaired the cap and a very -- very important.

MR. SKAREDOFF: Gas breaking through the cap?

MR. MEILLIER: That's right, and impairing the cap or migrating through the neighborhood.

Like, for example, for the Site 26 at Hamilton where basically it could upflow and, you know, gases could migrate into a neighborhood and -- and potentially exposing habitants to those -- to those gases.

So, you know, for Board staff it's important that the Navy either provides adequate set of data across, you know, an expanded period of time, which is going to be difficult if we are to start the cap next year or at least in the close future, or what -- what Board staff has recommended is that they implement a gas collection system within the design of the cap, you know, assuming that the cap would emanate a significant amount of gas. And it's -- even has been found --

After talking to my supervisor, he even told me there have been cases where -- and, actually, where it was -- where a study had been made, and, you know, the emanation potential of those gases were not very significant, and so they decided not to put gas extraction and gas monitoring there, but then after implementing the cap there was -- you know, there was an

increase of those production of the gases, and the gas was basically, you know, impairing the cap and also migrating to the neighborhood.

So even the studies -- so my point here is even potentially a study that would bring a negative result to the potential of gas emanation might not even be sufficient enough.

Another issue has been the characterization of the hydroconductivity of the native geologic material found beneath the waste. And in the regulation in Title 27 there is a relationship between the -- that is stipulated between the hydroconductivity of the native geologic material and the hydroconductivity of the cap.

And it's important that the Navy characterize the hydroconductivity of the native material in order for them to tailor the hydroconductivity of the cap because what you don't want to happen is the bath -- the bathtub effect where the hydroconductivity of the native material is basically less than the hydroconductivity of the cap, and the water will collect and that, you know, will increase the potential for leachate generation.

So in the --

MR. SKAREDOFF: I'm sorry. I didn't quite follow you there. You have a cap over the native material and that has something to do with how well the

cap allows water to percolate through it compared to the native material?

MR. MEILLIER: Exactly. There is a relation between those two, those two hydroconductivities.

MR. SKAREDOFF: And how would this bathtub effect then work?

MR. MEILLIER: For example, the hydroconductivity of the native geological material is less than, meaning by that it's less conductive.

MR. SKAREDOFF: So if the cap allows water through, but then it's captured by the native material --

MR. MEILLIER: Exactly, yeah.

MR. SKAREDOFF: I see.

MR. MEILLIER: So you -- what you want is you want the hydroconductivity of the cap to be less or equal to the hydroconductivity of the native geologic material.

And so, it's important to enforce that the Navy characterize that, that value. And, you know, in their proposed changes they are not putting the whole statement of Title 27 which stipulates that relationship, so it's a concern to Board staff.

And another issue has been the leachate generation. It's very -- you know, I guess we don't

want more leachate to leave the Site 1 footprint. We want the leachates to stay within that footprint or landfill footprint and be treated -- and not be treated outside of that -- of that footprint. And so, that needs to be also stated in the -- in the ROD.

And, lastly, the Navy needs to also state in the ROD that they have considered the San Francisco Bay Regional Water Quality Control Board basin plan as an ARAR and why they would not include them in that current document.

Those are the points of contention. And so I guess, you know, after meeting with the supervisor, what he said is that, you know, we have to -- if some of those points are going to be resolved, we would have to, you know, write a letter of concurrence and then stipulate the points that have not been resolved, so that it would be a conditional letter of concurrence.

So, that's -- to answer your question.

I'm done.

MR. SKAREDOFF: I guess I'm puzzled a little bit. I'm not sure I got it all straight. But I got the impression initially that mainly the conflict resolution, some technical wording, wordsmithing on this, but it sounds like we've got some contentious issues here that have some substance to them.

MR. TYAHLA: Well, if I could just -- quickly just chime in on a couple of those issues. I just took some quick notes here.

Regarding the landfill gas, the Navy had agreed awhile ago that during the design we will be testing for landfill gas. And in recent conversations with our designer and with the people actually likely to construct the landfill, it's very likely that regardless of what we see in that kind of design testing for landfill gas, it will probably include some kind of at least passive venting so that we don't have that issue, so you have some control over where landfill gas would emanate. So I mean --

Because Laurent -- Laurent brings up a really good point. What if you go and you test for it, and for some reason you don't see much, and it generates later?

MR. SKAREDOFF: Sure. It's been accumulating over a long time.

MR. TYAHLA: And, actually, part of my plan for the cover cap design is going to include getting the people likely to build the thing in with the designer before the design gets done. So I did construction, so I want to make sure that happens.

On the hydraulic conductivity beneath the waste, the thing's overlying Bay mud, which has been a

really, really, really low conductivity, and we'll have to, like, get back with how we're going to address that comment because we're looking at the resolution, say, and what -- and this is getting technical -- ten to the minus six centimeters per second, kind of like conductivity in the cover or less or -- or less than or equal to what is underlying so you can avoid that effect.

So we need to look into how technically feasible it is to either meet that criteria and to measure it at the site. So, it's not -- it sounds like a good -- it sounds like the right thing to do. The regulation's written like that. So, it could be a matter of the fuel denigrating too. So, there could be a lot of players involved in that.

MR. SKAREDOFF: Is it going to be hard to make a cap that has a low enough conductivity?

MR. TYAHLA: It'll be more difficult to assess what it is beneath it, what is actually beneath it, what is that comment going to be. But we haven't -- you know, we have to come up with a good response of how we're really going to tackle that.

MR. BOYER: Didn't the geology guy that was here a couple months ago say that the cap that was the presumptive cap, it's about the same as the Bay mud? I

remember him saying something like that.

MR. TYAHLA: That's true. But that might be based on like existing data we know about Bay mud, but if -- depending on how you read the regulations, you have to actually physically go check that with the site, that may be a little different because it may vary because of -- the conductivity may vary. But on the hydraulic --

On the leachate generation, one of the things that we kind of agreed you can do is pull out totally dealing with groundwater from this ROD. So this ROD does not deal with groundwater. There's going to be another -- additional groundwater study assessed at Site 1 and then additional, like, following the process for how we have to deal with groundwater results when we meet for the groundwater ROD. If you remember, the ROD pitch I gave made that pretty clear.

MR. SKAREDOFF: I'm sorry, Steve. A little bit of an intricate thing to follow. I'm sure I missed some of the turns back there.

MR. TYAHLA: What I was talking about is one of the Board's concerns -- one of the Board's concerns about leachate generation. Well, leachate is something that's -- it's underground. It's essentially going to be groundwater at the site.

Well, we aren't dealing with groundwater in this ROD. We're totally going to do a separate groundwater study, assess what information we now have about the site, decide what additional work we have to do at that site with respect to groundwater, come up with its probably own RI or supplemental RI, whatever we need to do, ultimately just to have a ROD for groundwater. So -- so I'm not -- so, it's -- leachate won't get addressed in this ROD. It's going to be addressed in the groundwater ROD.

MR. SKAREDOFF: So we're going to do a groundwater process and come up with a Record of Decision on groundwater?

MR. TYAHLA: Yeah.

MR. SKAREDOFF: And I take it before anything's done on the site both of those would be completed so that the remedial action will take care of both of those issues.

MR. TYAHLA: Not necessarily. The groundwater could follow later.

MR. RAMSEY: I mean, this is -- this is why we're -- we're having problems.

Two years ago when we got the first ROD, and it was actually EPA's recommendation to proceed with the surface containment cap portion because that's something

we actually saw. We were generally supportive of that remedy. We had worked two issues two years ago, that was the institutional controls and the ARARs. This is the EPA terminology, CERCLA terminology about the applic- -- applicable -- applicability or relevant and appropriateness of these laws. You know, it's how you pick the laws. That's why --

You mentioned, Igor, there are still -- there are still -- we're still going through a number of the specific closure laws that apply to this military municipal landfill. There is laws that deal with the methane monitoring and closure plans and all these things.

We've got through some of the major ones that deal with the containment cap. That's the prescriptive cap design. Those are actually pretty -- we've got through those. Now we're just dealing with a few kind of remainder -- remaining ARARs.

MR. SKAREDOFF: I'm getting a sense, maybe, that the important thing is to try to get moving on this and get a cap in place and kind of tie up some of the loose ends.

MR. RAMSEY: Right. Because like last year when we were trying to go through the dispute resolution with the Navy, you know, probably -- it was

approximately this time last year, there was money that was -- had already been in the work to do the containment cap because we could not resolve the ROD. That money was lost, and we've been able -- we've delayed the construction.

And so we're trying to do it. We're on the second push to get this ROD, again, you know, signed, approved. It was a ROD that was started in 1999. That's a long time ago for a ROD to go through.

MR. SKAREDOFF: I agree. I'm with you. So we ought move along the best we can.

I -- just my sort of underlying concern here, what if the groundwater study finds out something that may be contrary to the assumptions that were made and --

MR. TYAHLA: Well, in all likelihood, as part of the -- you know, one of the things the cap does is source control and -- and alleviating at a minimum, you know, how much leachate you're going to generate. As far as groundwater being an issue, it's probably the smartest thing you're going to do anyway.

But the issue may be if you find groundwater super nasty and you want to do something with it physically, and we have to incorporate that later on into the design. We'll probably keep it in the back of our mind during the design, but that doesn't mean we

can't proceed with the design, and then deal with it later. But that's a good question, though.

MR. SKAREDOFF: One of the --

Just from my own perspective, one of the concerns I would have about Site 1 is this sort of a site action, water coming up alongside it from the slough, comings and goings with every tidal movement. Is the prescriptive -- is the remedy that's in the ROD -- does it address that?

MR. TYAHLA: Well, it's funny you should ask that because I met the other day with -- with the contractor. He's likely to be the one to build the thing because we have contracted with them to do the work plans for construction. And their engineer brought that exact issue up and came up with a concept that would potentially change how we would design the thing around -- you know, around the toe of the landfill or whatever you want to call it.

And that's one of the things I'll definitely bring up, you know, during my kickoff of the design. It's a very good point. That's been one of my concerns too.

MR. SKAREDOFF: Very nice we're --

MR. TYAHLA: Just don't tell my wife.

MS. WALLERSTEIN: Okay. Is that it?

MR. PINASCO: Site 22 stuff that we're putting together, the ARARs, Site 1 ARARs, and just small draft comments for the -- the Site 22 SAP that are somewhat in line with what EPA produced.

MS. WALLERSTEIN: Okay.

MR. SKAREDOFF: Oh, excuse me. Can I make a comment on the Site 22?

I looked over the map showing where the sample points were projected to be for the sampling plan, and I notice it's not very far from there is where the Contra Costa Canal comes through. And I wonder if it might be worthwhile to include several sample sites on the boundaries of Contra Costa Canal just for background information, if nothing else.

I mean, that thing supplies water to me and to a lot of other people. And since we're looking at arsenic in the ground generally, it may have been inadvertently applied along the boundaries there for controls. So I guess if we don't find any, I'd certainly be glad.

MS. WALLERSTEIN: We can certainly look at that.

MR. TYAHLA: Well, one of the things --

Well, had a couple of meetings about some of those topics that the Navy and the agencies have already

arranged meetings to discuss like early on, and Site 22, the work plan, is one of them. As a matter of fact, I'm just going to poke in my Palm Pilot here and make a note about that comment.

And I do have your E-mail here. So, that's a good point.

MR. SKAREDOFF: Thanks.

MS. WALLERSTEIN: Okay. We're way overtime. We're due for a break.

I did have the agenda for next meeting. And the presentation for the next meeting was going to complete the training. We're going to propose to have Tetra Tech do the fate and transport training.

I understand that Patrick Lynch has an additional presentation to do, and I was going to suggest that we do that in February.

Okay. Can we have a motion on that and vote?

MR. RAMSEY: Margaret, the fate and transport or whatever, that was January, wasn't it? It's February now?

MS. WALLERSTEIN: No. I may have misstated. Fate and transport in January --

MR. RAMSEY: Okay.

MS. WALLERSTEIN: -- and then Patrick Lynch's presentation in February.

And we'll still put out draft agendas for everybody to approve, but I just wanted to get that on the record that that was the plan for the next two meetings.

MR. RAMSEY: Is Patrick --

Are you going to say something tonight, or is this in addition?

MR. LYNCH: Yeah, this is in addition. I have two -- two reports I prepared.

MR. SKAREDOFF: Would it be feasible to reverse that and have Patrick's presentations earlier and the training later? Does that work?

MS. WALLERSTEIN: If the RAB wants to do that. My feeling was to go ahead with the fate and transport because we have quite a few top- -- we have quite a few reports coming out over the next year starting in February. So my feeling was to complete the training and then move on with Patrick's second report.

MR. SKAREDOFF: Then I guess I would ask Patrick.

MS. WALLERSTEIN: You can flip them if you want.

MR. SKAREDOFF: If he's okay with that, I'm okay.

MR. STRAUSS: What was that?

MS. WALLERSTEIN: The next agenda, January we're doing a fate and transport training by Tetra Tech, and then Patrick Lynch will do his second presentation in February.

Do I have a motion on that?

MR. BOYER: I'll make the motion.

MS. WALLERSTEIN: Second?

MS. WILLIAMS: I'll second it.

MS. WALLERSTEIN: All in favor?

THE BOARD: Aye.

MS. WALLERSTEIN: Motion carried.

All right. Let's take our break now. We'll come back in ten minutes, and then we'll start with the presentations.

I would like to propose that we break again at 8:30 sharp. If we still have questions and answers at the end of the presentation, I hope presenters can be available during the second break, and then we can reconvene if -- if we need to continue.

Does that sound okay?

So we'll take a ten-minute break. We'll be back at 7:45 sharp.

(Recess from 7:34 p.m. to 7:47 p.m.)

MR. SKAREDOFF: Mary Lou, before we get started, I would like to make a correction to something

I said in the first half of the meeting where I talked about the canal near these places we're going to be testing for arsenic. That was incorrect.

I looked more closely at the map with Phillip's help, and I found out it's not the canal. It's Diablo or Seal Creek that runs past there. And so the concern wouldn't be so much it's getting in our drinking water as it would perhaps be getting into the environmental -- environment, habitat.

MS. WILLIAMS: Well, if you've been drinking in arsenic for all these years, I guess you're safe, if it was the canal.

MS. BYRNE: It grows mustaches.

MR. RAMSEY: Mary Lou, I would respond that the water in the canal is raw water that goes to a filtration plant, and that water has to meet drinking water standards at the tap. So I believe that --

MR. SKAREDOFF: It is tested for arsenic by the water district, but the process does not specifically clean up water for arsenic.

MR. RAMSEY: No. They would know if -- if they had -- like some of the other states in the west, Nevada, they had elevated arsenic, the water treatment plant would not deal with it, correct, but they do test it to verify that they're meeting --

MR. SKAREDOFF: They're not finding arsenic --

I'm not saying that, you know, we know there's arsenic. I'm not saying that there is arsenic in the water; okay? Let's just be clear about that. Don't know.

MS. WALLERSTEIN: Okay. I guess with that we'll move to our presentations and Peter Strauss.

MR. STRAUSS: Hello again.

Before I start, I received an E-mail from Mary Lou asking me if my recommendations carry any authority, and the simple answer is no. I'm an advisor to the advisory board, and there is -- there is no legal weight that my recommendations have with the exception that it's a -- this is a Superfund site, and there are nine criteria for which a -- a remedy is selected, and one of those criteria is community acceptance.

So in my -- my experience has been if the community makes enough of a case to the regulatory community and to the Navy, that there might be some adaptation.

I wanted to put this up just for background, not to embarrass Steve. I really wanted to -- to make sure that this -- this is not to -- because this is my last appearance at the RAB, and I wanted to leave you with these because these have not been answered yet.

So. . . .

And as Phillip was saying before, I had questions about the processes that go on here, and those are sort of the major concern about the conceptual -- having a conceptual model by which to evaluate these things. It's very important.

And some of this information is really needed from -- from my perspective to have a good conceptual model. I'm sure there is many more questions that can be asked.

And I'm not going to go through these. I'm not going to read them to you. I guess everybody can read. If anybody has any questions about these questions, but I just wanted to make sure that this is -- this is left with the RAB.

I'm going to give my presentation the same way I did the Site 13 and Site 22. I'm going to essentially put up bullets that are a summary of the concerns that I raised in each of these reports. And not so much for me to speak about them, but for anybody to ask questions about them.

This is the SWMUs. And I always think that I'm in a cartoon when I say that word.

MR. SKAREDOFF: Have to be a certain age to remember that cartoon.

MR. STRAUSS: You know, that's not true. That's not true. My daughter had the Shmoos also.

But I said here that my -- my biggest concern in the RI here is there is a -- is a predilection towards natural attenuation, recommending, actually, a focused FS on natural attenuation, that that would include natural attenuation and no action.

And I think that that's a -- it's not only problematic for -- for me and many of the communities that I've worked with. Some people view that as a -- as a no action. It's not -- it's not -- it's really not no action, but I think that you have to have a significant amount of biodegradation to actually think of this as -- as an action. If it's just aspersion or diffusion in the environment, I don't think that it's a remedy that -- that should be approved.

As well the -- the VOCs for which this is proposed, although for petroleum sites natural attenuation seems to be working better than for VOC sites. For VOC sites, that's Volatile Organic Compounds, it's estimated only 20 percent of the sites will natural attenuation be a good remedy.

And the remedial investigation concludes that the levels of contaminants are stable. And to me that suggests that -- what are we talking about? I mean,

there is some degradation. There is some degradation products that are detected, but I think that the RAB, and I hope that the regulators are on top of this.

The second point really is a reference to the -- the letter that I sent. I -- I really think that there is a -- there is a -- there is a need for a -- for a good history of the site, you know, how things were transported, how they were -- if things were -- at Site 22 it was -- I always had the question, you know, if you had perchlorate in the groundwater, did you get it from missiles? Did you unload the fuel at some point and put it back, and was there a transference?

And some of that is -- I'm just ignorant on, and I just don't know the -- the processes, but I think that that needs to be -- I think the EPA also has a similar comment on the SWMUs.

I think point No. 3 the Navy has agreed to do much of what I would -- what I would recommend.

I wanted to point out that the bottom bullet, at Moffett Field there were agreed-upon cleanup levels for diesel and TPH, gasoline, and you might want to reference those.

I'm just changing this. If nobody is asking any questions, I'm going to talk.

I think that is a -- that this is a problem

with the -- with the RI for the SWMUs is that contaminants were not measured in Seal Creek, and they are somehow inferred by groundwater.

The Navy has a response to that. I mean, you know, to give credit, there is a -- there is a -- there is a response, but I think that it's -- it's such a critical pathway for contaminants to enter the environment that I think that it's -- that at least monitoring should be done in the future of contaminants in Seal Creek.

MS. BYRNE: Can you show where Seal Creek is on the map?

MR. STRAUSS: I'm not sure I can.

MS. BYRNE: What area? Is it all the tidal or --

MR. STRAUSS: Well, I think --

MR. MCLEOD: It runs along the edge of Clyde.

MR. RAMSEY: It goes all the way up --

Can you see this okay, Ms. Byrne?

MS. BYRNE: Yeah, uh-huh.

MR. RAMSEY: It crosses --

This is Bailey Road. It's coming off through this other area of brevements coming in from probably Marsh Creek or something. It goes right up the middle of this whole Magazine Area or the middle of the valley.

It's really -- well, actually, it's kind of parallel. This is Kinne Boulevard. It does parallel Kinne Boulevard, essentially, and it crosses --

These are the SWMUs sites that Peter is referring to, and Seal Creek runs just right between the golf course and the base and all of the housing, some of the administrative buildings and things like that, and then it crosses right by the gate. It crosses over and then heads out into the Hastings Marsh Area, I guess.

MS. BYRNE: Thank you.

MR. SKAREDOFF: So, it doesn't run through the Tidal Area?

MR. RAMSEY: It hits the Seal Creek marsh, which is the Taylor Boulevard Bridge site, and then it's kind of multi marsh areas. I'm not exactly sure how surface water flows once it gets into a bigger marsh system.

MR. STRAUSS: Maybe Patrick can add to that, if you have information on Seal Creek.

MR. RAMSEY: It's probably -- it's just difficult to like follow the course. I guess we can look at aerials. We can probably see it, I imagine.

Igor, most of those areas are not directly accessible. As you walk down by the creek in the summertime, most of that's fairly dry. We have been

down in Seal Creek at the SWMUs sites before in the summer, and it's essentially a dry bed. There can be some little pools of surface water, you know, stagnant water. It's probably groundwater, you know, just -- you know, what -- you know, on the surface or something like that.

Winter you got flows. Summertime it's generally not flowing.

MR. STRAUSS: And for Site 17, which is a -- the ROD had a -- recommended no further action. I think that there is -- from reading the documents, and I had a conversation with Phillip about this today, and maybe it's a mistake the way that the document is -- is worded, but the -- there is a sump that was located on the southeast corner of -- of this building that was reported. And the Navy has looked for it, but they looked for it further away than the southeast corner of this -- this particular building.

And I wanted to point this out because I'm -- I'm concerned that during the site investigation when that was -- when that was looked at, I think that was 1993, that there might be some -- some different information that came in during that time.

And so I only see one sample, one ground soil -- one soil sample on the eastern side of building

IA-24 and one groundwater sample south of that. There are many other samples taken in a different location.

So I wanted to point that out to make sure that this is -- and I'm sure that the Navy is going to respond, and then I'll amend this if it needs to be amended.

MR. SKAREDOFF: Peter, that's Site 17, that's where they did maintenance on the forklifts?

MR. STRAUSS: Yes, and that's where the battery acid sump was, and that's the missing battery acid sump.

MR. SKAREDOFF: That's what we're talking about?

MR. STRAUSS: Yeah.

MR. SKAREDOFF: So the concern there would be acidity and lead, perhaps?

MR. STRAUSS: Yes, lead.

There would be -- you know, where we would find that. I mean, they -- they -- they dumped approximately one battery per day, the acid, into -- into the sump until 1974. I believe from the 1940s to 1974. And personnel said that there was -- there was just an earthen pit that they dumped it in. And so you're worried about soluble lead leaching down into groundwater.

There is not that much to say about this other

site. I mean, I -- there is -- I think that there is a -- from my perspective you need to clean up sites to a carcinogenic risk level of one to the minus six, not the -- not the ten to the minus four.

Now, there is a target range that EPA has, ten to the minus four to ten to the minus six. I think you all who attended the health risk assessment seminar know about that. And --

But from my perspective I would like to see things cleaned up to the highest standard. And if not, if you can't do it, then you have to say what -- what actions you're going to take, just not a no action.

And so, there was one chemical that was in that risk range of ten to the minus four and ten to the minus six, benzyltoulene.

And my last point here is that I was concerned about the -- the ecological -- the excedence of -- of ecological risk thresholds in drainage channels in Seal Creek in Site 17.

These are ecological indicators. They are not standards. I don't think they're even ARARs. But they tell you something. And before the site is given a no further action I would like to see somebody investigate these indicators and why they -- why they're exceeded and explain it to the RAB. I don't have an explanation

for them.

With that I'm --

Yes.

MR. McLEOD: I'm concerned about the boundaries too, I guess.

Is this your handout here, this one (indicating)?

MR. STRAUSS: No.

MR. McLEOD: Are you talking about the disposal area in the landfill site?

MR. STRAUSS: (Shakes head.)

MR. McLEOD: You're not. Okay.

MR. STRAUSS: You were reading.

MR. McLEOD: I was.

MR. STRAUSS: Okay. Thank you.

Well, this is my final presentation to the RAB. I will be --

As I receive comments I will be amending the -- the reports, and I will send a final report to the Navy and to -- to the -- the community cochair. Hopefully everybody can get me comments, if they have them, by December because that's when I'm going to start amending my reports. Now, I'll get one report for the four sites.

MR. SKAREDOFF: Is there a web page or web site

address? How do we get the comments to you?

MR. STRAUSS: I'll give you my E-mail address later.

MR. BOYER: Steve, can the -- can the Navy provide Peter with some of the procedural manuals for some of this stuff on his questions about the procedures and stuff?

MR. TYAHLA: Well, his first slide, when he said he didn't want to embarrass me, I feel pretty embarrassed, but, you know, he's totally right.

Those July questions, they came in to me, they weren't really addressing a specific report. Now, I don't want to bore you with contract details, but we set up our contracts to review documents or respond to comments to a specific report.

Well, these kind of came in from like here, and we addressed them. There were a lot of good questions, and it's going to take some research to do. And, actually, probably a good month ago that I'm kind of tasked -- need to start to get to work on those, and we're late. We should have had those to you guys like probably a month ago at least. So we have to follow up with that. I do owe him that.

And that will be one of the things we'll look into, Chris, is, like, you know, what kind of manuals

we've had. And part of the problem with Concord is that, you know, it's mothballed. So going back and trying to find out who worked in what shop, they aren't there right now. So, it will take some digging into to do some of that. So the July questions we need to answer.

And, also, both of his reports we've gotten in draft form. We've already been working on -- internally on responses to comments that I think are really helpful on -- finalize the report, give us the questions, and, of course, once we get responses, follow-up questions, give us a call, that kind of a thing. So we want to make it as complete as possible when he puts out his final report.

MR. BOYER: I'm curious about the -- the bat- -- the battery repair shop in that, you know, they've talked to former employees, and former employees say it exists, but they couldn't say, yeah, walk out this door and turn right and go 27 steps, and that's where it would be that they -- I don't know.

How hard is it to characterize that and find it out there after you've talked to somebody about it?

MR. TYAHLA: We'll have to address that as one of the comments. I'm honestly not super familiar with Site 17 as I should be right now to give you an

off-the-cuff answer.

MR. STRAUSS: I mean, you know, the -- the site investigation seemed to have a location in mind. I mean, I think it's -- you know, it's a couple of hundred yards away from the building.

MR. BOYER: Okay.

MR. STRAUSS: And that's where they looked. They dug trenches, and they took a number of soil samples. Now, I don't know if that was a -- and they didn't find anything.

MR. TYAHLA: One of the problems when you're going by some historical knowledge is that -- I've been through it at other bases -- and it's just like someone says look here. You spend the money, you dig, you do whatever, investigate the site, there is nothing there. And it does make you scratch your head. Well, they think something was there, but it's in the wrong place.

What we'll have to do when we address these comments is look back at what the basis was for where we looked where we did and try to figure out, you know, what's up.

But, I mean, I've spent a hundred thousand dollars at sites at other bases looking for something that turned out to be a lid to a 55-gallon drum. So you don't know.

MR. BOYER: Just curious.

MR. SKAREDOFF: A big metal detector, maybe, to find piles of batteries.

MS. WALLERSTEIN: You have a question over here.

MR. MCLEOD: Well, this might be of some help to you. As far as the history of the site, you might try the county historical society and the Concord historical society and all of their contacts.

I've personally talked to people who worked on the base for 25, 30 years, worked in their nuclear facility, and he had a lot of interesting information. He lives here locally in Martinez. And there are people there, but I think you have to perhaps make it known that you're trying to find them.

MR. TYAHLA: Okay. Thanks.

MR. BOYER: Thank you very much, Peter. Appreciate it.

MR. STRAUSS: Thank you.

MS. WILLIAMS: Thank you, Peter.

MS. WALLERSTEIN: You asked about his E-mail.

Do all the RAB members have the contract information that Tetra Tech puts out?

MS. WILLIAMS: Should be in there. We got it last RAB.

MS. WALLERSTEIN: All right. I'll make sure you get it sent out to you because everybody's addresses and contract information, including Peter and Patrick, is on there. I'll make sure you get that so everybody will be able to submit comments.

MR. RAMSEY: Thank you, Peter.

MS. WALLERSTEIN: And then we have Patrick Lynch. He will be presenting on the Site 1 Landfill.

MR. LYNCH: My name is Patrick Lynch, environmental consultant with Clearwater Revival Company. And the Local Reuse Association obtained a Technical Assistance Grant from the U.S. EPA and used that money in part to pay for my services to review the administrative record for the Site 1 Tidal Area Landfill.

Again, it's located in the Tidal Area adjacent to the R Disposal Area, and I believe it's -- Taylor Road is the road alongside of it.

Just a little bit about the Site 1 history. It was the base's sole landfill from 1944 till 1979. Now, there is a couple of key issues why those dates are important.

Prior to 1960 most of the landfill waste in the Bay Area was burned before it was landfilled, so that has potential to cause some additional contaminants to

be formed during the burning process.
The second important date is 1981, and that's when RCRA authorized Solid Waste Management Units for municipal waste. So prior to that date there was really no distinguishing between common household garbage and hazardous wastes. So all that material was essentially put into the landfill at the same time.
The investigation reports that I primarily reviewed about Site 1 were the site investigation report, and that site investigation was conducted from '88 to '92, and then there was a feasibility study.
And normally we'd see a feasibility study prepared following a remedial investigation. Here the feasibility study focused solely on one alternative, and that was a landfill cap. And while it did look at different designs for that landfill cap, that was the only alternative considered.
There was also a technical memorandum that was performed that did a lot of trying to adjust data gaps both about the geology beneath the landfill as well as some concerns about groundwater contaminants and groundwater migration.
And finally in 2001 the version of the Record of Decision that I prepared. Since this time there has been an updated version of that Record of Decision

that's been issued by the Navy.
There is not a lot of substantial difference. Again, it has to do with how the cap would be designed. It doesn't really change my -- my comments or the results of my review at all.
And there is also an ecological site investigation that was conducted, and that was not conducted for the Site 1 landfill but for the other sites within the Tidal Area. And because it includes the R Disposal Area, which is the wetlands along the border of Site 1, some of the findings from that report I think are important to consider in selecting an alternative for the landfill.
The significant issues that I identified in my review, one had to do with the site boundaries. Even in the current version of the Record of Decision the site boundaries are described essentially where the elevation rises above sea level.
And it's not a very good legal definition to have, and I think it's important that there be a record of the boundary of the landfill to be established because -- essentially the wetlands since 1981, when this RCRA took effect, should have been protected from any erosion of waste from the landfill cap into the wetlands.

It's clear from looking at the information about the wetlands or the landfill surface that some erosion has occurred. And so the boundary between Site 1 and the wetlands is poorly defined, and I think that it needs to be a surveyed boundary in order to protect additional erosion into the wetlands.
The other significant issue I found in the feasibility study was the actual volume of waste that's in the landfill. And that's, you know, got to be one of the most important figures to come out of the remedial investigation is an accurate estimate of the amount of waste that's landfill.
Again, the feasibility study, the Record of Decision, recommended a presumptive remedy containing the landfill contents. I had some concerns that the remedy proposed in the Record of Decision does not contain the five components that basically are required of that presumptive remedy.
And there is also some special consideration that should be made when applying that presumptive remedy. And they -- the two that I don't think were addressed very well are addressing wetlands and addressing special military wastes.
This is not so much an issue with groundwater data. There are some problems with the quality of the

groundwater data, but there is obviously -- and obviously you heard some agreement here tonight that there's a need for additional groundwater characterization.
In addition to that need for additional data and more reliable data, the separation of the groundwater from the remedy and installing a cap without considering groundwater I don't think has been really thought -- thought through, and that is a concern.
Here are -- here are the landfill volumes that were used in the different documents I -- I looked at. We look in the ROD, and we'll see a figure of 33,000 tons. Now, I've converted that to a volume using a specific gravity, and I come out with 33,000 tons equivalent of about 25,000 cubic yards of landfilled waste.
Now, in the feasibility study most of the analyses are done using 200,000 cubic yards of waste. And using that -- that volume of waste an estimate of how much it would cost to perform on-site disposal was made, and the Navy estimated $13 million.
You see if we take that $13 million, it works out to about $65 per cubic yard to do excavation and off-site disposal. We prorate that to the larger or the smaller waste volume estimate, and we come out with a

figure of $1.6 million, which is actually cheaper than the cost of the proposed cap.

Another thing that's of interest is -- again, this is a figure from the feasibility study. In making a cost estimate they had to perform an estimate of the amount of fill material that would have to be imported to the site to actually construct the cap on the landfill. And the estimate based upon, again, a 13-acre landfill was 113,000 yards.

Again, if we're considering a smaller volume of landfill waste of only 25,000 cubic yards, and we're concerned that excavation and off-site disposal will create a lot of additional truck traffic on neighborhood streets, we also have to be concerned about the truck traffic that's going to be created by importing soil, and look at which one of those options may be more -- more beneficial.

Under the EPA's guidance for the presumptive remedy at a military landfill, it's supposed to contain five components. One is the landfill cap, which in the version of the ROD I reviewed was estimated to cost $2.4 million. I think the cost in the most recent version of the ROD has been updated to $2.6 million.

So, that component as well as the institutional controls are the only two components in the presumptive

remedy contained in the ROD.

As we heard during the discussion here earlier this evening, landfill gas is not addressed, leachate has not been addressed, and groundwater is proposed to be addressed through a separate ROD.

Okay. State law requires that a landfill gas survey be completed as part of a -- a landfill closure. And, again, the issue is that that is going to be completed as part of the design -- rather as part of -- prior to the alternative analysis. Again, putting in a gas collection and treatment system could add to the cost of the remedy, and that's the concern.

The estimate for the emissions, and that was done using an EPA model based upon the 200,000 cubic yards of waste, so it's a larger volume of waste, an estimate was made of 20 tons of methane a year. That was compared to the limit of -- it's not actually 150 tons per year, but 150 million grams of methane, which is very close to 150 tons a year. But that figure should be applied to the entire facility.

So if you have more than one landfill on your facility, that would take away from your allowable capacity. So we can't simply compare 20 tons to 150 tons. We need to look at all the landfills on the base and their potential to emit methane.

Looking at the results of the samples that were actually collected from the waste material, we do see a low organic content indicating what I presume is a lot of the material that came from the Wood Hogger site. It was wood that had been burned in the incinerator that was located there and buried. And so a lot of the organic content of the waste has been removed from burning.

But as -- as Laurent said, the age of the landfill is no substitute for actually testing the landfill gas. He cited Hamilton Air Force Base.

Fort Ord they had a similar problem, not so much with methane but with toxic air contaminants. Hunters Point, they had a problem with a landfill fire on a -- after the landfill had been capped. So, there is enough methane to sustain a fire. It went on for several weeks, that landfill fire.

Landfill leachate control, again, the concern here is that some of the waste is actually submerged in the shallow groundwater and that allows, again, the -- the waste components to become dissolved in the water, and it also creates a hydraulic gradient. And though there is the centerlying Bay mud, and it does have a low permeability, there is some evidence of some sand lenses. So we don't know how complete that Bay mud is

throughout the entire base of the landfill.

What often happens on these tidal sites in the wetlands is the drainage channels in sloughs that form meander. And there is a potential that -- you know, over the geological history of the site probably be about 10,000 years based upon ice ages that occurred in the Bay. There is potential that a stream may have meandered and maybe filled with a lower permeability sand that may have eroded from the hillside. And it may, quite frankly, create a hydraulic connection between the shallow aquifer that's perched on the Bay mud, and there is a neutral aquifer about 50 feet down.

There is no groundwater investigation. There have been some feasometers installed that we can use to measure the gradient between the shallow and lower -- the deeper aquifer. And we actually see whether the shallow aquifer is traveling into the deeper aquifer, or the deeper aquifer is confined and actually moves water upward, and determine whether or not there is a potential threat to that deeper aquifer.

The issue with wetlands, one of the things in reviewing the work that had been done, they basically had done some isotopic analysis of the water and looked at some of the radioisotopes of hydrogen and oxygen to try to determine what the fate of water was within the R

Disposal Area. And it kind of came to the conclusion that water was essentially evaporating in the area, and the water within that wetlands area was becoming more saline.

CalFED was a recent water quality criteria. It was established to ensure sufficient fresh water flows in the Delta. And one of the criteria in there specifically talks about wetlands in the Suisun Bay. And one of the criterias is it not be allowed to become a brackish marsh. And that appears to be through the tidal gates and such that are in that ardent disposal area wetlands -- that appears to be what's happening, and it doesn't appear to be consistent with this recently enacted legislation.

And there is a concern if more Bay waters allow the flow into that wetland it may change the way the hydrology's been characterized. So, there may be a need to make this change to comply with the ordinance, and it may ultimately change much of the investigation work that's been done to date.

In the Ecological Risk Assessment they base their impacts using what they consider to be a fraction of the total metal concentration that was bioavailable, and it would be more conservative to have used the total concentration and -- in evaluating ecological impacts.

And also in the wetlands area there was a number of locations where the surface water had an extremely low pH. It was very acidic. And with surface water we generally anticipate the pH to be between four and eight based upon carbon dioxide dissolving in the water. And in this particular case with a pH as low as 1.2, it's an indication of some kind of anthropogenic source. So, it's some kind of waste disposal practices is the only way to really produce that kind of pH in surface water.

Also looked at the issue of military specific wastes. And this is primarily talking about things like explosives and ordnance, propellants and chemical warfare material.

I went back and looked at the hazardous waste generation records for the base for the year 1999, and with the exception of bilge water from ships and asbestos from building demolition debris, the largest hazardous waste volume that they produced was this propellant otto fuel, or auto fuel, which is used in torpedoes.

None of the information I reviewed on the base provides historical context how that waste was managed prior -- prior to hazardous waste laws being enacted.

MR. BOYER: I think the sailors drank it.

MR. LYNCH: There is also some anectodal evidence of fill from a 750-pound bomb being disposed of the -- at the landfill.

And, you know, we can argue whether or not that happened or it didn't happen. What's important is, if it did, if it was in the landfill, would that impact our remedy? Would that somehow make the cap less effective having this material in there?

The groundwater analysis conducted around the perimeter of the landfill, there were two quarters of analysis for high explosive compounds like TNT, but it was discontinued before four quarters were completed as required by the work plan based upon no detections during the first two quarters.

And, again, the reason for collecting four quarters of data is to account for all the potential seasonal effects. And if you discontinue your monitoring, again, you have inconclusive data.

The last issue there, obviously, is low level of radioactive waste that's part of the municipal waste stream. And this is a contentious issue, I know, between the Navy and the EPA about the radioactive material in their landfills.

What I found in my review is references to a radiation survey at the site. And I have regulator

comments on that proposed sampling plan, but I don't see any results. So, it's not clear why that was not done. I mean, there was initially a rationale for conducting the sampling, and why it was not completed is not clear.

Again, the groundwater data, there was a series of reports. The first one was the Site Investigation Report that covered that period from 1988 to 1992. And in subsequent reports all of the data that was collected during that investigation was deemed unusable because there was not an explanation provided when data was qualified.

And what's ironic is in the subsequent investigations and technical memorandums and remedial investigation and technical memorandum that were prepared they did the exact same thing. So, there is a concern that a lot of usable data is being ignored in trying to address the alternative.

An example was in the technical memorandum there was concern that groundwater sampling revealed a high level of Cobalt above what people would consider a background level. So, there was an effort to go back out and actually to take samples for this radioisotope, which is Cobalt-60.

And, again, the results are inconclusive because the level of concern was basically below the

detection limit that was achieved in the sampling. And that's the kind of -- kind of issues that with a -- with a lot of the data is that despite the fact that it does not provide conclusive evidence, it's not conclusive of the absence of a contaminant.

Another issue is the groundwater flow direction. In a tidal area site with shallow groundwater, you're trying to manage your -- very small differences in elevation in groundwater between wells that are spaced generally about 400 feet apart. And often the way the well was designed, the screened interval is actually submerged beneath the groundwater level.

And when the well is closed, there is a pocket of air in the casing, and as the ground level water fluctuates -- it's basically a piston in the well. And what will happen is if the groundwater level in the aquifer has recently dropped, when you try to remove the well cap, there will be a little vacuum actually in the well casing. And the alternative maybe is that if the groundwater level has recently increased, you've got to remove the cap, and it comes off with a pop.

Now, in order to get accurate measurements for determining groundwater flow direction, we need to open up all of those well casings and allow the elevation of

groundwater in the well to equilibrate to the atmosphere. And because we're -- had walls that are screened in Bay mud, this is a process that requires a lot of patience. So if we're -- there is some question about whether or not the data that has been collected on groundwater elevations was really done with that level of care to allow us to accurately describe groundwater flow in -- in the Tidal Area Landfill area.

The last comment about Otter Sluice, you know, there are some studies that were done trying to determine the interaction of groundwater between Otter Sluice using measurements of tidal elevations and groundwater elevations, but there was never a description of really how deep that slough is constructed to, and that will really have a bearing on how that groundwater flows in the area.

And I just put this up. You can't see it very well, but give you an idea of the wells that are surrounding -- here's the landfill border, and here is -- essentially there is seven Tidal Area wells that surrounded the site at the boundary. And there was some additional investigation work that was conducted along this area here (indicating).

Again, they were investigating whether or not a -- a man-made channel that shows up in aerial

photographs might have been acting as a preferred pathway for flow of groundwater because it might be backfilled with something more permeable than Bay mud.

And there also was an effort there to investigate some of these sand lenses and to determine -- there actually was only two locations where they installed well pairs to try to get some measurement of that hydraulic -- or vertical hydraulic conductivity, but, again, the results seemed inconclusive with that -- the gradients flipped with each other between the measurements that I -- I looked at.

In terms of the -- the groundwater strategy, I don't think that a -- a separate ROD is appropriate. And the reason I say that is the -- we need to look at what the potential remedies are for groundwater contamination at the site, if it indeed is contaminated, and the groundwater ROD is not going to recommend no further action.

One -- one is source removal, going in and excavating the landfill. And if we put a cap on it, that is going to make that extremely more difficult. We now have a hundred thousand additional cubic yards of soil to handle.

The other is extraction and treatment. And here we have a problem because of the geology. We have

this low conductivity Bay mud. We put in an extraction well. We won't influence more than five feet away from that well pumping it dry.

So, what we need to do is we need to put in horizontal trenches, and so now we're looking at the cost of performing an excavation essentially around the perimeter of the landfill. And then if we're trying to basically extract groundwater from a trench, we've got to compete with the water flowing into the wetlands.

And so using a groundwater extraction and treatment scheme in this type of environment won't be very effective. So we're left with a containment option, which is putting in a slurry wall or some type of a subsurface barrier around the perimeter of the landfill. Again, this is a $10 million project trying to surround a ten-acre site with a slurry wall.

And, again, the problem that you run into trying to install a slurry wall in this environment is that the Bay muds don't have sufficient strength to hold the wall, and so you end up having to dig the wall actually deeper than necessary to provide containment so you can get into some soils that actually will provide foundation for the wall.

So essentially the conclusions of my investigation of Site 1 is to really look at the cost

and benefits of the remedies. Essentially putting in a cap really provides minimal benefit because the waste is submerged in groundwater, and that's -- that's essentially what you're trying to prevent the cap -- the cap is intended to prevent from occurring.

And I think it's important that the groundwater be included in -- in this ROD simply so that we don't eliminate potential groundwater cleanup options that may be more cost effective than what we will ultimately decide, but we have to make that decision with a cap on the landfill.

And the other one is to complete the investigation of the landfill gas and leachate and groundwater before proceeding with the remedy.

So if anyone has any questions, I'll --

MR. BOYER: Mary Lou, do we have to take a break before we go to questions?

MS. WILLIAMS: I think Janine needs a break because it's about 55 minutes. So she needs a 10-minute break.

THE REPORTER: Five is fine.

MS. WILLIAMS: You tell us when; okay?

THE REPORTER: (Nods head.)

MS. WILLIAMS: Why don't we break for at least five, or maybe 10 minutes, and then we can bombard

Patrick with questions.

(Recess from 8:40 p.m. to 8:47 p.m.)

MR. BOYER: Are you ready for questions, Patrick?

MR. LYNCH: I'm ready.

MR. BOYER: Hey, Steve. So how does the Navy get its landfill numbers? I'm serious. How did the Navy --

MR. LYNCH: I mean, I can actually provide that explanation.

MR. TYAHLA: Well, you know, in my hand I have something I can't just hand you, but it's a -- preliminary draft responses to a lot of the comments we've received on the Site 1 ROD.

And I appreciate Pat's thoroughness in going through everything the way he did. It was a good presentation. I don't necessarily agree with it all, but it's a good analysis.

The 33,000 tons of waste that was in an earlier report came from some unknown source. I have no idea where that number came from, and that's why that was not used in like the ROD or the FS and that kind of thing.

Based on a 2001 toposurvey and photosurvey, based on that, like, 125,000 to 135,000 cubic yards of waste. And I can't give you the details

exactly how this calculated with the topomaps and all that, but at 125,000 -- and I know that's -- that's like above -- below the 200,000 we used in our -- our FS.

But even at 125,000 cubic yards, I did a quick calculation with the same $65 per cubic that Patrick had done, and that's -- that takes you over 800 right there. And that's just for disposal -- excavate and disposal costs. So the price of doing something like that --

MR. BOYER: From the public perception, does the Navy have a history of talking to the public about we have a choice of either moving 25,000 cubic yards of ick through your neighborhood versus a hundred thousand yards of clean filler through your neighborhood?

MR. TYAHLA: Well, in a Feasibility Study, whenever you get into like short-term effectiveness, it's like the CERCLA or the nine criteria, that's where you're really dealing with things like that, like, well, is it better -- what's the risk to the local -- to construction workers, too, those poor guys, but, you know, you're dealing with digging and hauling and all that sort of thing and transporting it. And that is --

You know, I could go through a litany of things that make me cringe at the thought of digging up the landfill, you know, on a personal basis, an engineering basis, but the volume -- the volume correction there is

something I definitely thought was important to point out. And rather than 33,000 tons, we're looking at 125,000 cubic yards.

MR. BOYER: And the thing that makes me wonder about the digging up is when you say most of this is below water or in groundwater already, is there some treatment of that water as you pull stuff off and you end up with this huge marsh there? How do you remediate that?

After you pull the stuff out, you got this water that -- that all of the stuff's been sitting in. Do you pump that stuff out? I -- I assume that you have to backfill with dirt or some sort of substance that's -- that's worthy of that area.

MR. TYAHLA: Well, RCRA is kind of an interesting law in that once you dig up something, once you take something and move it out of the ground, you have to do something with it, and it's -- it's a waste. You got to characterize it and deal with it.

So, that would mean in my mind -- say you dug that stuff up, and you had problem No. 1 unsolved. You have to dewater it because you aren't going to haul it around wet, free liquids, you might say.

And whatever that discharge water is, you're going to have to do something with it, which would

probably mean treatment and -- there's various ways you can deal with it. You can treat on site, try to get a MTS permit for discharge or get -- like haul it away, treat it, all that sort of thing.

But, yeah, you wouldn't be able to haul away, like, wet material. You'd have to either -- do something, deal with that moisture.

MR. BOYER: Okay. When you were talking about landfill gas control, Patrick, you said that the waste had lower organic content. Does that mean not a lot of methane production, anaerobic, aerobic --

MR. LYNCH: That is --

That is what you would expect.

One of the differences, though, with this particular landfill is it was put on top of wetlands, and so there is a layer of vegetation material. And even the Bay mud itself has such a high organic content that the evolution of methane may very well be coming from those underlying Bay muds. As the fill is placed on top of it, it compresses and forces the gas up.

MR. BOYER: Okay.

MR. TYAHLA: When we get into the design of this, I can't see us not putting at least some amount of passive like, you know, methane venting. Like he said, he brought up, you know, it's true, but, you know, a lot

of biologic material down in the Bay mud generate methane. So you don't want to have that problem.

MR. BOYER: I wouldn't go down there and light a cigarette on an inversion day, you know.

MR. TYAHLA: Right.

MR. BOYER: Yeah.

MR. McLEOD: Well, early on I was concerned that -- that it -- that it was considered to be following the rules of a dump or a city dump, and it seemed like -- that there were different laws relating to being built on -- the dump actually being put on wetlands. And the way I read it, the presumptive remedy wasn't proper if it was actually a wetland as opposed to a dry land dump. Is that meaningful?

MR. LYNCH: That's not -- that's not --

It's somewhat accurate. Again, there is the issue that the -- below groundwater, and that's obviously because it was constructed on the wetlands. And then it's an issue if the wetlands itself should have been given special consideration, but without special consideration it's almost -- what hasn't been -- the wetland that hasn't been landfilled yet, that should be given some consideration about whether what they're proposing to do with that cap could impact that -- that area. But it's more the shallow -- shallow groundwater.

MR. McLEOD: The other question is, it's sort of outside the box, but I still think it's relevant, and I've brought it up a number of times, and it's just the boundaries of the site.

And it's historically known that there was a smelter there in the site just north of that, and there was also a lumberyard that was there for a generation. And have you guys studied that yet?

And I know it was -- it was told to me starting in 1995 and, you know, 2000 and 2001, 2002 that they were going to take a look and see what remains of that copper smelter. Has that -- has that been done?

MR. RAMSEY: We've talked about that, actually, Dean, to a certain extent.

I was asking the Navy, do you want to say anything or not?

MR. TYAHLA: No.

MR. McLEOD: It's just outside the boundary of this site to the north.

MR. TYAHLA: It's not within 2, 9, 11.

MR. McLEOD: It's not in any of your early investigation.

MR. TYAHLA: It's to the north?

MR. McLEOD: It's to the north. It's clearly -- I have photographs.

MR. RAMSEY: Let me --

I just want to give the Navy a chance to speak because we have talked.

I'm well aware of the issue years ago of getting a report, Dean, and I never forgot about that. I've reminded the Navy several times in discussions about the Tidal Area, the landfill. I want to remind them of my comments about the historical operations that in addition to shipbuilding it was the -- it was -- the Pacific smelter did actually only operate for about three years. So at least at the turn of the 19th Century smelter did only operate for just a number of -- you know, three or four years, I believe.

So, that's good news for the Navy that we've talked about that a little bit to Steve, and we kind of keep that in a category of like new sites, and that's on my radar for new sites.

But right now we have a pretty big list of sites and priorities, and then it gets down to, you know, other activities and new sites. And so at least U.S. EPA is fully aware of the comments. We have brought it up to the Navy about this operation. And in particular I think in the course of discussions a while back on the Tidal Area sites we talked about how it would be interesting to see what data has been collected

for the Tidal Area.
This is when we hadn't actually seen the RI for the Tidal Area sites, to see the data collected all the way up along the river essentially where the -- where the smelter was located. But right now we're really dealing with this primary -- you know, high-priority sites.
And we have a list, and it came up in discussions of other sites, but we actually already have another whole group of sites, Dean, that's already being worked up in terms of new sites.
And that's the Navy's Munitions Response Program has about eight sites, and we're not exactly sure what they are yet. And, you know, as we move through these other sites, I would like just to believe that these other things will eventually rise up.
MR. MCLEOD: My concern was -- and it's because I'm ignorant of the technical ways that you set the boundaries for the sites, and I guess that just triggered it when you mentioned the boundaries.
You were thinking of really defining to the metes and bounds what the boundaries were, but I'm concerned about how the decision was made to make the original boundary and ignoring what I consider to be the most significant area, which has never been

investigated. So, it's probably because I don't understand the site selection process well enough.
MR. TYAHLA: Well, if you're asking are we going to, like, encompass this whole smelter site within Site 1, I can tell you now, like right now, no. We're going to have to -- making it a new site would make more sense in more ways conceptually.
MR. MCLEOD: I'll tell you why I think it would be relevant to keep. I know it's probably not practical and probably not going to happen, but the rationale that I have why you would want to do that was because it's in the wetlands, it's closer to the wetlands from the site that you're talking about.
So if you're talking about the flow of water, they're flowing over this non-defined site where the smelter was and where the shipbuilding plant was and where the lumberyard was.
And so, it's north. It's north of this dump site. And so all of the remedy that you're talking about is ignoring that which is -- you know, it's pretty heavy industry. So, you know, maybe there is -- maybe there is no way to consider, but it seems to me like you're going to -- it would have a major impact on what you're doing now, I would think.
MR. STRAUSS: I want to just share my

experience with Moffett Field with the landfill adjacent to a wetland. And first the Navy was going to separate the -- the landfill from the groundwater, and there was an argument made that was accepted. And it was really from the community that that did not make sense. It's the same -- it's the same argument that Patrick is -- is putting forth now.
I think that the tradeoff you have to make is whether there is immediate need to cap this landfill or to investigate the groundwater thoroughly so you have -- you can make a more reasonable and, for lack of a better word, holistic conclusion.
And I think that that's a -- and I don't see that -- the landfill is existing for -- for -- I don't know how many years out there. Is there any reason now to go ahead and cap it and then discover later on that you might have a problem by doing that?
And I think that that's -- now, EPA, Mike Hill was the -- was the RPM. He really went off on that argument.
MR. RAMSEY: This was --
That's not Site 22 at Moffett, the landfill, Site 22 landfill.
MR. STRAUSS: No; the runway, Site 1.
MR. SKAREDOFF: I had sort of an observation I

would like to report. I guess I was listening to Steve talking about the -- sort of the reasons why you might not want to open this up, you know, the big landfill, all of the -- all of the concerns about the exposures and unearthing all this nasty stuff that's down there, which I guess, from my understanding, we don't really know what's down there because we haven't done, like, sampling through -- through the masses.
I think I remember hearing you say that the idea there was that it's so heterogenous that any sort of samples would probably not do a good job of characterizing everything that is there.
But, at any rate, accepting that, but our suspicion is that there's some really nasty stuff in there, and so we're kind of leery of going in and digging it up and exposing it and having workers having to do deal with this and having to haul it through the community.
I guess what the question comes down to, then, given that we have some nasty stuff that we don't want to dig up, is it better to try to encapsulate it the best we can and leave it there and hope that nothing bad happens, or is it better to go in and take it out, haul it off someplace where it can be safely disposed of, given the potential higher risks of that activity, and

then the site is actually, you know, good after that?
And so I see that's really a -- kind of a central question, and I don't think we have -- I'm not comfortable with either answer right now. I wonder if anybody with maybe more ideas or maybe expertise or experience at other sites similar to this might shed some light, might help us to decide what's the more appropriate solution.
MR. TYAHLA: I think the dilemma you just described is I think part of the reason why over time EPA developed a presumptive remedy for really the larger size landfills. You know, there aren't many presumptive remedies in the guidance out there. I think there is probably still one for groundwater. There's just a couple. There is a handful of them. There aren't many of them out there. There are a couple or three or four different categories.
MR. RAMSEY: Right.
MR. TYAHLA: It's not like there's hundreds out there. It's not like there is a hundred of them. And it's because landfill has been a pretty common problem, and they're usually not small. And those are some of the big factors that enter into it. I wish -- I wish we had the perfect record for everything that went in there like you would a modern landfill, but we don't.

MR. LYNCH: There was a case down in Fort Ord in Monterey. They actually had six landfill cells, and two of them were on the wrong side of the road. And so in that particular case they actually did go in and excavate the contents of those two landfills and redispose of it within the other four. So, there is some precedence.
And there was a case where they had a legitimate concern and, in fact, found exploded ordnance as they were doing the excavation and took care with that.
But, yeah, I think you're right. You have a situation where you could go in and you could excavate the material, and there is some certainty that you've addressed the problem.
And the other alternative right now is essentially what I call throwing land away. And it's obviously a very unsustainable practice, but you're just basically saying here's ten acres of earth, and it's got -- it's got no future use. So, that's another significant tradeoff.
MR. STRAUSS: And maybe you're looking at the dilemma -- I mean, this isn't -- you're talking about a dichotomy, and maybe that's -- maybe this is not a dichotomy. Maybe there is multiple ways of treating

this -- this kind of stuff so that you could make -- it's possible that you could address the groundwater first and then later on cap it without excavating a lot of stuff, maybe excavating some. So maybe -- maybe finding hot spots within it.
MR. SKAREDOFF: Yeah, for the distribution of some really nasty stuff, maybe selective excavation might make sense, but I guess what I'm hearing is we don't really know what it is and where it is necessarily.
MR. RAMSEY: Well, there was -- there was a decision by the whole team, you know, back in the '90s when the site was being investigated that they would allow the presumptive remedy approach for the characterization and the analysis of alternatives, be it the characterization would be we're not going to make Swiss cheese of this land, we're not going to perforate it, we're going to expect the waste is going to be kind of hetero- -- heterogenous.
So, there was an attempt to do some borings. And how deep they went, that's probably questionable. But this is -- all the teams and the regulatory group years ago that made that agreement.
It was also decided -- it was an agreement of decision on the part of the team by probably about four

RPMs previous to me to proceed with this focus. It was an attempt to streamline the process, believe it or not, and to get a remedy for the landfill cap. That was a decision made by the team maybe ten years ago.
But this group of people now, we're left to defend the characterization that was deemed acceptable at the time. Sometimes it's not the easiest thing. We're also going back ten years when kind of the state of the presumptive remedy and the investigation and a group of --
MR. SKAREDOFF: I don't really --
The point isn't to attack anybody or, you know, call into question anybody's motives or competence. It's just knowing we're here at this time, at this stage of technological and environmental and what have you, regulatory involvement and development, and so what's the best decision to make now, here and now, and is it to stay with the previous presumptive remedy, or does it make sense to reexamine this again or not?
I don't know. I'm frankly very baffled by this whole thing. It's kind of a hard one to poke through.
MR. RAMSEY: Well, I add, though, I mean, stick my neck out, from the regulatory side, we're not -- look at the comments and hear what the Navy's saying.
I believe that this agency record is fairly

clear. We had a fairly consistent presence on these projects, and I think there were agency records, and the agreements that were reached to go this direction were all there. I haven't done a lot to change that necessarily.

But then, again, when I'm looking at the -- some of the other projects, other landfill Records of Decision that have been done recently, my perspective when I look at things, it appears as if we're actually -- we're making the Navy do more almost, to a certain extent -- to be careful, I guess about what I'm saying, but it appears that sometimes we're making the Navy jump through as many or more hoops than they have had to do at other bases.

In particular I've mentioned before in the past the Moffett Site 22 ROD there were no issues about was it hazardous or municipal waste, and it's being used for a golf course, and it's kind of a soil cap.

I've got examples of a number of bases of landfills around the area that have been done recently, the last few years, and they tend to sometimes be not as rigorous as we've been pushing the Navy.

So at least, you know, thinking as my job and EPA's, I believe we are trying to push them as much as we can and being --

MR. STRAUSS: But, I mean, if you look at Site 20 -- I mean, if you look at Moffett Field, don't look at Site 22, look at Site 1 and --

MR. RAMSEY: Site 22 is a ROD that was just signed like six months ago. So you have to look at not a very good example, possibly, right, but there is a ROD that --

MR. MENESINI: A great example of a landfill.

MR. RAMSEY: But, Peter, the thing, if I could, the soil -- the results on the groundwater from that site are higher than the groundwater results we see around the Site 2. The results of the soil sampling from Site 22 at Moffett are so much higher than we've seen from the results of the landfill at Concord.

So I always feel that it's kind of like a typical kind of mix. It's a dump. I agree it's based on limited soil sampling that was agreed to by the team, you know, close to a decade ago.

And, again -- it was, again, I know just a comment, I mean, Patrick, the idea about carving out the groundwater was simply EPA's -- that was our attempt to try to move along a component of this project that we deemed was capable of moving forward at the expense of stopping the whole project.

Just, you know, reiterate to the public, this

is a -- this Record of Decision for this landfill was first raised -- the proposed plan, the public meeting, the formal public meeting, was about 1999. EPA's just trying to finish, you know, this process, you know, the Record of Decision. At least my attempt to try to get this thing done, not leaving the landfill sitting out there in just kind of an abandoned state. Sort of my philosophy in this.

MS. WILLIAMS: I was just going to ask if we could adjourn this formally -- our court reporter lives on the other side over there -- and we could continue this -- anybody that wishes to continue this informally, we just won't have it as part of the record.

Is that agreeable with everybody?

MR. BOYER: Sure.

MS. WILLIAMS: Dean.

MR. McLEOD: Make one more comment. I'll be quick. As a representative of the Local Reuse Association who obtained a grant, I would certainly like to thank Patrick for an exceptionally --

MS. WILLIAMS: We hadn't gotten there yet, Dean.

MR. SKAREDOFF: I want to thank the Environmental Protection Agency for providing that grant. We're very pleased. And I would hope -- I would

hope that these questions that are brought up are carefully responded to by the Navy. That's all I've got to say.

MR. COOPER: Is applause appropriate at this point for Patrick?

(Applause.)

MR. MENESINI: I would just like to say that the Martinez landfill, by many factors obtained, is larger than anything we see in this particular site, and it was successfully capped. And it's in the Tidal Area, and it's -- we use the -- the landfill gas to run our furnaces at the sanitation district. And so I'd just like to report that very, very, very truly it's not easy. There is always difficulties, but very truly these things can be capped in an expeditious fashion.

MR. BOYER: Will we adjourn, then, Mary Lou?

MS. WILLIAMS: Is there a motion to adjourn?

MR. MENESINI: I'll move.

MR. BOYER: (Raises hand.)

MS. WILLIAMS: Chris is going to second it.

All in favor of adjourning?

THE BOARD: Aye.

MS. WILLIAMS: So no opposed?

THE BOARD: (No audible response elicited.)

MS. WILLIAMS: Okay. We are officially

adjourned, but I would like to make a statement, please.

I'd like to thank everybody for being so positive tonight and all of this past year. I think we've made an awful lot of forward progress, and next year there will be more progress.

And also I'm going to wish all of you Happy Thanksgiving and happy holidays, in case you don't want to say Merry Christmas.

(Off record at 9:13 p.m., 11/3/03.)

CERTIFICATE OF REPORTER

I, JANINE P. GAMBLE, Certified Shorthand Reporter of the State of California, do hereby certify that the foregoing meeting was reported by me stenographically to the best of my ability at the time and place aforementioned.

IN WITNESS WHEREOF I have hereunto set my hand this 19th day of November, 2003.

Janine P. Gamble

JANINE P. GAMBLE, RPR, C.S.R. No. 10372

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